

REMARKS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 7-17, 19 and 20 are now present in this application. Claims 7, 15, 17 and 20 are independent. Claims 7, 15, 17 and 20 have been amended. Reconsideration of this application is respectfully requested.

Rejection Under 35 U.S.C. § 102

Claims 17, 19 and 20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,904,779 to Dhindsa et al. (Dhindsa). This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

In the Office Action mailed on March 14, 2003, the Examiner asserted that Dhindsa teaches that the electrostatic attraction between wafer 208 and chuck 206 is reduced by the positioning of wafer 208 at a certain distance from chuck 206 (a predetermined distance). The Applicant's arguments at that time can be summarized in part by stating that the initial positioning of the wafer 208 and chuck 206 does not reduce an electrostatic attraction.

The Applicant's specification provides that the insulating tape is selected based on the tape material having characteristics such that the tape can be used in a vacuum environment without lowering the degree of vacuum, and further provides that the thickness of the insulating tape is selected to have a thickness which reduces the electrostatic force between the substrate and the lower electrode (Applicant's Specification, page 5, lines 22-26). It is clear that both the thickness of the insulating tape and the distance between the substrate and electrode is determined in advance, so that when lifting of the substrate begins, the electrostatic force is already reduced (Applicant's Specification, page 7, lines 23-25).

By contrast, the "distance" described in Dhindsa only becomes a factor after the lifting of the substrate has commenced. Clearly, in the device and method of Dhindsa a sticking force between the substrate and the chuck actually increases before it decreases. Therefore, the substrate of Dhindsa does not lift off of the chuck easily because of a pre-established distance, or because of a pre-established thickness of an insulating tape (Dhindsa, Col.5, lines 22-26 and Fig.2D). In summary, the "positioning" of wafer 208 with respect to chuck 206 (especially at a predetermined distance) is of no consequence as taught by Dhindsa. Neither is the intermediate material dielectric 210

described by Dhindsa as a factor in the reduction of electrostatic attraction.

Particularly, in the Applicant's claimed invention, it is the distance established between a substrate and an electrode (by the thickness of the insulating tape) that determines a degree of reduction in electrostatic attraction. Further, it is certain selected characteristics of the insulating tape which allows it to work in a vacuum environment without impairing the operation of the apparatus. Dhindsa is silent on the thickness of the dielectric 210 (as a factor in reducing electrostatic attraction) and also silent with regard to the properties or special characteristics of the dielectric in terms of operating in a vacuum environment. These characteristics cannot be assumed.

Therefore Dhindsa fails to teach positioning a substrate at a predetermined distance from the electrode plate to obtain an intermediate structure, wherein said positioning reduces electrostatic attraction between said substrate and said electrode plate prior to a lifting of said substrate, as recited in independent claim 17 (as amended), or, wherein the intermediate material is selected for having characteristics which do not lower a degree of vacuum, said intermediate material distancing the substrate and the electrode such that the distance reduces electrostatic attraction between the substrate and the electrode

prior to a lifting of the substrate, as recited in independent claim 20 (as amended).

Claim 19 depends on claim 17, and therefore is patentable for at least the reasons stated with respect to independent claim 17. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

Rejections under 35 U.S.C. §103

Claims 7-10, 12, 14 and 15-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dhindsa in view of U.S. Patent No. 6,243,251 to Kanno, and further in view of U.S. Patent No. 6,096,572 to Nakamura. Claim 11 stands rejected over Dhindsa, Kanno and Nakamura, as applied to claim 7, and further in view of U.S. Patent No. 5,874,361 to Collins et al. (Collins). Claim 13 stands rejected over Dhindsa, Kanno and Nakamura, as applied to claim 7, and further in view of U.S. Patent No. 5,985,104 to Westwood. These rejections are respectfully traversed.

Dhindsa (argued above with respect to independent claims 17 and 20) fails to teach wherein the intermediate material is selected for having characteristics which do not lower a degree of vacuum, said intermediate material distancing the substrate and the electrode such that the distance reduces electrostatic attraction between the substrate and the electrode prior to a lifting of the substrate. The same arguments apply to independent

claims 7 and 15. Kanno, which discloses a tape, does not teach special characteristics of the tape such as comprising a material that will not reduce a degree of vacuum. Neither will the tape of Kanno supply the deficiency of Dhindsa, because neither Dhindsa, nor Kanno place any significance on the distance established by the tape as a factor in reducing electrostatic attraction prior to lifting of a substrate.

Particularly, Dhindsa fails to disclose or suggest wherein said insulating tape is selected for having characteristics which do not lower a degree of vacuum, said insulating tape distancing the array substrate and the second electrode such that the distance reduces an electrostatic attraction between the second electrode and the array substrate prior to a lifting of the array substrate, as recited in independent claim 7, as amended, and similarly stated in independent claim 15, as amended. Neither Kanno, nor Nakamura, nor Collins, nor Westwood can fill this vacancy.

Claims 8-14 and 16 depend, either directly or indirectly on independent claims 7 and 15. Since neither Dhindsa, nor Collins, nor Nakamura, nor Westwood discloses or suggests the above-recited features of independent claims 7 and 15, none of the combinations applied by the Examiner can render claims 7-16 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of these art grounds of rejection are respectfully requested.

Application No.: 09/747,928  
Art Unit 1765

Attorney Docket No. 3430-0140P  
Amendment filed on September 12, 2003  
Page 12

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Percy L. Square, Registration No. 51,084, at (703) 205-8034, in the Washington, D.C. area.

Prompt and favorable action on this Request for Reconsideration is respectfully requested.

Application No.: 09/747,928  
Art Unit 1765

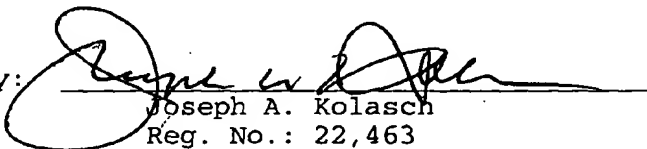
Attorney Docket No. 3430-0140P  
Amendment filed on September 12, 2003  
Page 13

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By:



Joseph A. Kolasch  
Reg. No.: 22,463

*MM*  
JAK/PLS/asc/slb

P.O. Box 747  
Falls Church, Virginia 22040-0747  
Telephone: (703)205-8000